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FISHERIES OF FRANCE 1/

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Summary

The production of fresh, marine fish in 1948 and 1949 at about 300,000 metric tons each year, was somewhat above the pre-war level. An important factor in this high level of production is the reconstruction and modernization of the French fishing fleet that was undertaken immediately after the war and is now nearing completion.

At present problems of production are considered by the trade to be secondary to the problems of marketing. Considerable attention has been given in recent months to improving transportation facilities, especially by expanding the use of refrigeration and to stimulating the demand for fish by propaganda and educational methods.

1/ American Consulate Report No. 225, Paris, France, February 10, 1950.

In 1949 the demand for fish was strong, in spite of the hot summer, and prices were generally firm. Only herring presented serious marketing problems.

The production of canned fish has been increasing steadily in recent years. The supply of raw materials, that continued to limit operation for several years after the war, is no longer a critical problem.

Considerable progress is being made in France in the utilization of fish rejected for consumption purposes or otherwise wasted, by processing it into meal and oil. There is still much to be done in the field, however, and it is estimated that at present only 20 to 30 percent of the fish available for processing is so used.

Introduction

The statistics presented in this report are obtained for the most part from the trade organization of the fishing industry, the Comite Central des Peches Maritimes. This organization receives reports from local committees in each of the fishing ports of France, and compiles statistics on a monthly basis. The information received by the central committee, however, is frequently less detailed than might be desired.

Reports from the smaller ports are slow to arrive, and there is a considerable lag before statistics become available. At the present date in January 1950 detailed information is complete only through August 1949, and there is little prospect that the delay can be shortened materially in future reports. The delay in statistics on fisheries issued by official agencies is much longer still.

The statistics available pertain mainly to salt-water fish, excluding crustaceans and shellfish. Information on the latter categories is incomplete but it may be possible to obtain fuller information in future reports.

All units of measure used in this report are in terms of the metric system. The commercial exchange rate in effect from the beginning of 1949 until September 20 approximated 270 francs to the dollar. Since that date it has approximated 350 francs to the dollar.

Production of Marine Fish

The quantity of fresh marine fish landed in France in the years just before the war amounted to approximately 282,000 tons annually comprising 73,000 tons of herring, 35,000 tons of pilchards, 24,000 tons of mackerel, 9,500 tons of tunny and 140,000 tons of other species. In addition, approximately 70,000 tons of salt cod were produced each year by French vessels. About half of the salt cod produced was shipped to French overseas territories and countries of the Mediterranean Basin.

The total catch was obtained by a fleet comprised of about 22,000 craft with a total burden of about 250,000 tons, including 325 steamships, 11,256 motor-driven craft and 10,231 sailing craft. Of this fleet the trawlers equipped for deep-sea cod-fishing were for the most part of recent construction and in excellent condition. Most of the other steel vessels for deep-sea fishing were steam-driven and 70 percent were more than 20 years old. The wooden vessels while less ancient

were small, and their activity limited to nearby banks which were partially depleted. Some consideration had been given before the war to a program for modernizing the fishing fleet, but no action had been taken for lack of financial means.

The war brought a rough but effective solution to this problem. The cod-fishing fleet lost 60 percent of its tonnage, other deep-sea vessels lost 66 percent and the wooden fleet 25 percent. At the end of hostilities a program of reconstruction was immediately established by the Administration of the Merchant Marine in conjunction with the fishing industry; the aim was to restore the former capacity with a reduced number of prototypes. As a result some 160 steel vessels were ordered for construction in France and abroad, the last of which should be delivered near the end of 1950.

All of these ships are reported to be of a very modern type with a large field of action; and the fleet so reconstituted is expected to exceed that of pre-war in its potential catch. Since the wooden fleet has already more than regained its pre-war tonnage with a larger average weight per vessel, the total tonnage of the French fishing fleet should reach about 250,000 tons by the end of 1950 and its potential production has been estimated at 400,000 tons of fresh fish plus 70,000 tons of salt cod.

Under war conditions and in view of war destruction, the production of fresh marine fish dropped to a very low point. In 1947, however, it had reached the pre-war level and in 1948 surpassed it. While the good results obtained in the immediate post-war years were in large part due to increased productivity of banks after several years of greatly reduced fishing activity, the efforts made toward reconstruction of the fleet have had increasing effect.

The production of fresh marine fish in 1948 amounted to 309,000 tons. The preliminary figure for 1949 is 293,000 tons or slightly below the preceding year. The slight decline may be attributed in large part to decreased yields of fishing banks, which already show the effect of increased post-war fishing activity. Detailed data for 1948 and so far as available in 1949 are shown in Tables 1 to 5.

Table No. 1 - Production of Fresh Marine Fish by Regions in 1948 and, so far as data are available, in 1949 (in metric tons)

	North Sea & Channel Coasts	Atlantic Coast	Mediterranean Coast	Total
1948				
First quarter	21,039	20,424	3,012	44,475
Second quarter	27,539	42,720	3,289	73,548
Third quarter	59,782	43,449	2,623	105,854
Fourth quarter	51,431	31,775	2,397	85,603
Total	159,791	138,368	11,321	309,480
1949				
First quarter	27,651	28,456	1,353	57,460
Second quarter	25,170	35,925	2,373	63,468
July-August	24,913	31,751	1,231	57,895
Total, first 8 mos.	77,734	96,132	4,957	178,823

Source: Comite Central de la Peche Maritime

Table No. 2 - Production of Pilchard, by Regions, 1948 (in metric tons)

Region	Summer season, (May to November)	Winter season	
		January through April	December
Northern Coast	441	---	---
Finistere	7,653	---	---
Morbihan	2,521	---	---
Loire-Inferieure	2,279	---	---
Vendee	4,910	---	---
La Rochelle	628	---	---
Arcachon	406	156	---
Basque Coast	1,327	2,336	845
Total	20,165	2,492	845
General Total	23,502		

Source: Comite Central de la Pêche Maritime

Table No. 3 - Production of Mackerel and Pilchard,
first 8 months of 1949 (in metric tons)

Month	Mackerel	Pilchard
January	702	498
February	1,820	1,179
March	4,762	900
Total first quarter	7,284	2,577
April	4,220	1,056
May	3,854	919
June	1,800	2,860
Total second quarter	9,874	4,835
July	1,624	4,406
August	2,222	4,024
Total first 8 months	21,004	15,842

Source: Comite Central de la Pêche Maritime

Table No. 4 - Production of Tunny - in 1948,
and first 8 months of 1949 (in metric tons)

Month	1948	1949
January	0	3
February	0	4
March	0	23
Total first quarter	0	30
April	0	24
May	10	217
June	48	885
Total second quarter	58	1,126
July	2,205	4,661
August	1,360	4,596
September	3,411	-
Total third quarter	6,976	9,257
October	1,893	-
November	10	-
December	0	-
Total fourth quarter	1,903	-
Total Year	8,937	10,413 (first 8 mos.)

Source: Comite Central de la Pêche Maritime

Table No. 5 - Production of Herring by Months in 1948 and, so far as data are available, in 1949 (in metric tons)

	Shotten Herring	Others	Total
1948			
January	3,051	132	3,183
February	886	39	925
March	89	123	212
First quarter	4,026	294	4,320
April	0	91	91
May	0	79	79
June	0	55	55
Second quarter	0	225	225
July	0	1,069	1,069
August	0	10,247	10,247
September	0	26,494	26,494
Third quarter	0	37,810	37,810
October	0	12,950	12,950
November	0	17,252	17,252
December	320	4,346	4,666
Fourth quarter	320	34,548	34,868
Embarked in Belgian ports	300	0	300
Total 1948	4,646	72,877	77,523
1949			
January	3,196	0	3,196
February	1,719	0	1,719
March	0	796	796
First quarter	4,915	796	5,711
April	0	644	644
May	0	243	243
June	0	48	48
Second quarter	0	935	935
July	0	1,707	1,707
August	0	8,398	8,398
Total, first 8 months	4,915	11,836	16,751

Source: Comité Central de la Pêche Maritime

As of September 1, 1949, the production of salt cod by French vessels, which is not included in the above data, was as follows:

Quantities landed in France:

	<u>Tons</u>
Fecamp.....	9,991
Saint-Malo.....	1,927
La Rochelle....	782
Bordeaux.....	7,715
Port-de-Bouc...	<u>791</u>

Sub-total.. 21,206

Quantities shipped directly from Saint-Pierre & Miquelon and the fishing areas:

<u>Destination</u>	<u>Tons</u>
Greece.....	1,200
Portugal.....	2,089
Italy.....	<u>100</u>

Sub-total.. 3,389

General total. 24,595

The total production of salt cod in 1949 probably reached about 45,000 tons.

The fishing seasons for the major species are evident from the monthly data shown in the preceding tables.

In summary they are approximately:

- Pilchards - In Brittany and Vendee from May to November, and on the Basque Coast from January to mid-April.
- Tunny - From mid-June to mid-October.
- Herring - From end-December to end-March for shotten herring, and from July to end-December for others.
- Mackerel - In Brittany the season runs from February to June; in Northern France the main season is from mid-June to mid-October.

General Marketing Problems

As noted above the production of fresh fish in 1948 amounting to about 307,000 tons was well above pre-war. In addition, the general food shortage in France, that during the war and post-war years had produced an exaggerated demand for fish as well as all other food products available, began to disappear.

By the end of 1948 it had become apparent, therefore, that the problem of production already on a fair way to solution would be less important in the coming months than the problem of marketing. Much consideration has been given

to the improvements that might be made in this field, notably by regularizing the arrivals of fish in ports by rotation of vessels, improving transportation facilities, especially by expanding the use of refrigeration, and finally by propaganda directed towards retailers and consumers.

Some progress has been made in the expansion of refrigeration facilities, but so far the most serious effort made has been in the direction of increasing consumption of fish by educational methods.

This project has been undertaken by the trade organization of the fishing industry, the Comite Central de la Peche Maritime. A Propaganda Committee has been established as a branch of this organization. This committee sponsors a daily radio program advising housewives of the best buys in fish for the day. It has published a book of recipes of fish dishes which is sold at a nominal price. It conducts demonstrations of cooking and a series of courses in cooking fish which are held in various cities of France. It has also issued propaganda leaflets intended to stimulate increased consumption of fish. Finally it publishes a monthly newspaper aimed primarily at dealers and retailers which seeks to bring about higher standards of handling fish at all stages of commerce and better methods of presenting fish for sale at the retail level. Since the Committee was founded as recently as June 29, 1949 and its program was not fully underway for some time later, it is too soon to judge how effective its activities may be.

It is reported in the trade that the character of the marketing problems involved in transportation has changed considerably since the pre-war period. During the years when movement of foods was controlled by the Food Administration, effort was directed primarily at supplying the large cities. Thus transportation facilities were gradually modified so that rapid shipment of fish from the ports to large cities is well organized. On the other hand, the problem of supply for small localities is more difficult than before the war since the increased transportation charges for small lots makes the cost of shipment prohibitive. Shipments to retailers and smaller towns must be grouped for a considerable area.

Recent Marketing Trends and Prices

A hot summer is traditionally linked with low prices for fish. Although the 1949 summer was among the hottest on record, however, prices for fish remained high. The demand was strong, especially in the provinces. This may be attributed in part to the drop in supply of many vegetables caused by drought. Housewives and restaurant-keepers replaced such vegetables to some extent with fish dishes. Also the greatly increased number of people on vacation in coastal areas was a significant factor, since many restaurants and hotels in such regions specialize in seafood, and the vacationers consume considerably more fish than in their homes.

On the other side, the supply of fresh fish was somewhat restrained by several factors. Many fishing units, expecting a slackening of demand for fresh fish due to hot weather, concentrated on fish for canning factories, such as tunny and pilchards; this tendency was encouraged by the fact that cannerys, anticipating a strong demand for these products, offered attractive prices. Thus fish for fresh consumption was somewhat reduced.

Nevertheless, overall arrivals were good until latter October when fishing was interrupted by storms that continued into November, accompanied by rises in fish

prices. While these storms brought the tunny season to an early end, the catch for the season as a whole was good and was sold at fairly high prices.

Of all major fish, with the possible exception of bream, only herring presented any serious marketing problem in 1949. In spite of the fact that the season was particularly long, the catch was smaller than last year; reduced production was primarily a result of a drop in prices and difficulty in finding markets. This may in part be attributed to the early beginning of the herring season in 1949; fish arrived at the market when temperatures were still very high and lost some of its quality by exposure to hot weather. Also with the season longer than normal, consumers lost their taste for the product before the end. An important factor, however, is probably the reaction of many consumers against this fish after a number of years when it was often one of the few types available.

Wholesale and retail prices of fish in 1949 are shown in Tables 6 to 8.

Table No. 6 - Monthly Average Prices of Fresh Fish to Producer, at Boulogne, first 8 months of 1949 (in francs per kilo)

Month	Average all fish	Herring	Mackerel	White tunny	Red tunny
January	86.5	69.2	132.6	-	-
February	86.8	74.1	109.7	-	-
March	69.7	73.5	64.7	-	-
April	57.0	32.0	48.1	-	-
May	53.2	26.8	45.1	-	-
June	56.3	63.4	42.0	-	-
July	21.4	41.4	38.0	134.0	-
August	36.0	31.1	32.3	173.4	85.9

Source: Comite Central de la Pêche Maritime

Table No. 7 - Monthly Average Prices of Fresh Fish to Producer at Dieppe, first 8 months of 1949 (in francs per kilo)

Month	Average all fish	Herring	Mackerel	White tunny	Red tunny
January	77.7	99.5	170.6	-	-
February	67.4	68.1	107.5	-	-
March	59.1	60.3	62.8	-	-
April	65.1	20.8	58.0	-	-
May	66.1	19.0	48.4	-	-
June	73.5	46.7	81.2	-	-
July	60.5	50.9	52.2	-	-
August	66.7	36.7	43.0	162.0	110.0

Source: Comite Central de la Pêche Maritime

Table No. 8 - Retail Fish Prices at Representative Stores at Specified Dates in 1949, Paris (in francs per kilo)

Month	Whiting	Bream	Herring, fresh	Black cod	Mackerel
January 18	150	150	-	-	-
February 15	160	160	-	-	-
March 15	150	-	-	-	-
April 19	100	-	-	-	130
May 17	160	-	-	200	100
June 14	130	140	-	-	140
July 19	140	130	-	330	130
August 16	150	-	110	375	110
September 13	110	125	100	230	120
October 18	160	140	120	410	150
November 15	220	130	-	330	120
December 13	198	-	130	-	190

Source: Observation by Embassy staff.

Consumption

Fish is an important element of the diet in France. No full meal is considered really complete without a fish dish. The consumption of fish is smaller in Central France and in Southern France, excepting perhaps a narrow coastal strip, in the first case because transportation problems make supply more difficult and in the second case because the Mediterranean production of fish is fairly small and preservation is more difficult. It is also significant that France is a predominantly Catholic country, and the rule of abstinence from meat on Friday tends to encourage the consumption of fish.

The demand for fish was somewhat exaggerated during the immediate post-war years by the unsatisfactory food situation in France. While the over-all consumption was limited by the supplies available, some species, particularly herring, which are normally considered somewhat inferior, were bought eagerly at high prices. The demand has now returned to a more normal pattern.

Fish Canning

The fish canning industry in France is fairly important. There exist some 240 factories located along the coasts that employ about 18,000 workers. In recent years production has been limited by supplies of fish, oil and metal. These factors, however, are now improved to a considerable extent, and production will henceforth probably be limited mainly by effective demand of consumers. In 1947 the canning industry treated 35,000 tons of fish for a product weight of 30,000 tons; and in 1948 the corresponding figures were 37,000 and 32,000, respectively. While data for the year 1949 are not yet complete, as of November 1, 1949, 36,400 tons of fish had been delivered to canning factories as compared with 33,100 tons at the same date in 1948. The activity of the canning industry in 1949 and, so far as data are available in 1949, are shown in Tables 9 to 12.

Table No. 9 - Production of Canned Fish and Quantities of Fresh Fish
Used, 1948

Type of fish	Fresh fish used	Production	
		Weight of fish plus can	Cases ^{1/}
	(Kilograms)	(Kilograms)	(Number)
Pilchard	13,456,949	11,701,680	585,084
Tunny	6,752,962	5,872,140	293,607
Mackerel (large)	4,864,669	3,891,720	194,586
" (small)	389,240	338,460	16,923
Herring	1,365,631	1,187,500	59,375
Sprats	1,623,347	1,909,820	95,491
Other	8,800,363	7,040,280	352,014

^{1/} Cases contain 100 cans.

Source: Bulletin of the Fish Cannery Association

Table No. 10 - Raw Materials Used by the Fish Canning Industry,
1944 through 1948

Item	Unit	1944	1945	1946	1947	1948
A - FISH (fresh)	tons	4,614	14,743	24,410	35,130	37,253
B - Olive oil	tons	2	313	230	255	866
Other veg. oils	tons	166	462	693	1,136	1,970
Vinegar	hect.	1,060	1,358	7,305	8,264	8,486
White wine	hect.	29	17	33	147	78
Salt	tons	782	2,451	3,882	5,006	5,385
Tomato	tons	245	630	911	1,989	1,770
C - Cans	tons	956	3,546	7,148	9,205	11,354
Wooden cases	unit	74,728	220,171	380,299	413,152	553,050
Cardboard box	unit	79,008	300,642	698,652	1,021,890	1,200,787
D - Coal	tons	2,842	7,095	12,561	15,821	16,069
Wood	tons	220	271	590	549	548
Fuel oil	hect.	193	1,719	5,598	6,599	6,416
Electricity	1000Kw	142	319	610	920	1,102

Source: Bulletin of the Fish Cannery Association

Table No. 11 - Quantity of Fresh Fish Used to Obtain 1 Case of 100 Cans

Type of fish	Quantity of fish per 100 cans (Kilograms)	Denomination of can 1/	Contents of can (cc.)
Pilchard	23	1/4 club 30	130
Tunny	23	1/6	142
Mackerel (large)	25	1/4 club 30	130
" (small)	23	1/4 club 30	130
Herring	23	1/4 club 30	130
Sprats	17	1/4 club 30	130
Others	25	1/4 club 30	130

1/ Terms used by Fish Cannery Association

Source: Bulletin of the Fish Cannery Association

Table No. 12 - Quantities of Fish Delivered to Fish Canneries During the First 10 Months of 1949 and 1948

Type of fish	1949 (Kilograms)	1948 (Kilograms)	Difference between 1949 & 1948 Percent
Pilchard	16,998,364	12,244,999	/ 39
Tunny	11,775,409	6,639,339	/ 77
Mackerel (large)	3,411,897	4,233,916	- 19
" (small)	420,342	384,245	/ 9
" (Boulogne)	732,128	630,153	/ 16
Norway lobster (Nephros norvegicus)	37,798	201,125	- 81
Sprats	531,948	285,057	/ 87
Anchovies	61,743	94,775	- 35
Scallops	14,730	510,932	- 97
Herring	1,476,616	859,097	/ 72
Others	936,192	7,502,184	- 88
Total	36,397,167	33,585,822	/ 8

Source: Trade publication

As is evident from the above tables, fish canning is limited to a few species of which the most important are tunny, mackerel, herring and pilchard. The activity of the factories is, of course, seasonal, their operation corresponding to the fishing seasons described above.

In addition to its seasonal character, the industry is subject to marked fluctuations in activity caused by variations in the landings of fish. As a result of storms the supply is sometimes totally interrupted, and factories must close down temporarily. In particularly favorable fishing periods the rate of operation must be increased to the maximum. This instability makes the problem of labor difficult, especially since the role of labor in fish canning is large.

Serious study is being given by the industry, therefore, to means of spreading over several days the processing of exceptionally large arrivals of fish in order to maintain a more even rate of operation and to prolong the operation of factories beyond the fishing seasons.

While the problem of spreading the processing of exceptionally heavy deliveries of fish over a longer time is primarily one of storage, the simple use of cold storage is not sufficient for some fairly delicate fish such as pilchards that have already undergone some fatigue on board the fishing vessel. Special methods that are now under study appear encouraging.

In order to prolong the operation of factories beyond the fishing season, several solutions have been envisaged. The one is to supply factories with the traditional types of fish outside of the usual seasonal periods when the fish are caught near the coast, that is by equipping deep sea vessels with facilities to keep the fish in good condition. This possibility is being seriously explored.

Another proposal is to equip canning factories for handling products other than the seasonal fish. The possibilities for a fish-canning factory to turn to fruits and vegetables, however, are very limited, and in many cases the period of maturity of fruits or vegetables corresponds with the fishing season. Generally the rational location of fish-canning factories, that is near the ports, is not compatible with the rational location of fruit or vegetable processing plants.

A more advantageous alternative has proved to be the processing of non-seasonal fish not previously used for canning and considerable progress has been made in this line. It has largely taken the form of the canning of prepared fish dishes, which need only to be heated before being eaten. The preparations are made according to recipes developed by each firm. A considerable variety of such prepared dishes made with a diversity of fish are available. Such products have proved popular and the trade hopes that sales will continue to expand.

Salting and Smoking

While it has not yet been possible to obtain statistics on this phase of the fishing industry, the following general observations may be made:

There exist in France approximately 400 plants for salting and smoking of which the largest employ about 200 workers.

The main species of fish salted are cod, herring and to a lesser extent, pilchards, anchovy and mackerel.

Almost all cod are salted after slicing and cleaning on board the large trawlers that work the banks of Iceland, Newfoundland, and Greenland. Once the fish is landed it is conserved in brine or in salt, dry. Subsequently, it may be simply repacked in barrels or it may be dried after washing and draining. The drying may be done in the open air, as at Bordeaux, or it may be done

artificially in industrial drying plants, as at Fecamp and St-Malo. It is frequently sold as fillet of cod in waxed cardboard packages holding about 500 grams. The principal centers of the drying industry are Fecamp, Bordeaux, St-Malo and Port-de-Bouc. The total production of salt cod probably reached about 45,000 tons in 1949.

The salting of herring is a fairly simple process in France, and is carried out either on board ship in barrels or on land. The proportion of salt is from 25 to 30 kilos per 100 kilos of fish. After about 8 to 10 days of salting the herring may be sold as such or may be used to make smoked herring or herring saur. The principal ports where the herring is landed and processed are Boulogne, Fecamp, Gravelines, Dunkerque and Dieppe. Before the war, of an average total annual catch of 75-80,000 tons, about 35,000 tons were salted, and these are approximately the figures that obtain currently.

A large part of the herring salted is smoked before being put on the market. In France the common practice is what is termed cold-smoking, in which the temperature does not exceed 25 degrees Centigrade. Beech wood followed by beech shavings and sawdust are the favorite fuels. The length of smoking depends on the product desired, fillet of herring saur being the most popular.

Crustaceans and shellfish

It has not yet been possible to obtain any detailed information about recent production of crustaceans and shellfish. It is estimated that 1949 production amounted to about 7,000 tons of the former and 44,000 tons of the latter.

Fresh-water fish

The most recent information available on fresh-water fishing in France is a study made in 1947 by the Administration of Waters and Forests of the Ministry of Agriculture. At that time it was estimated that the total production of fresh-water fish, excluding migratory fish, amounted to about 10,500 tons. This figure comprised about 4,400 tons from lakes and rivers, 5,600 tons from ponds and 500 tons from trout-producing establishments. In addition, the annual catch of salmon was estimated at about 200 tons and of shad at 1,000 tons.

Byproducts

In general, fish is not landed in France for producing meal and oil.

The fish treated for this purpose are those rejected for consumption because of poor condition or quality. Fishermen prefer to concentrate on bringing in fish to be sold for food since the prices obtainable for such are much higher than those offered by producers of meal, and fish that appear to be unacceptable for food are usually thrown overboard. Nevertheless, it has been estimated that the quantity of fish landed that do not meet food standards or are otherwise wasted amount to about 15 percent of the total.

The utilization of such fish is not well developed. A recent study seems to indicate that only 20 to 30 percent of the fish that would be available are processed by fish-meal factories. In Boulogne, the largest fishing port in

France, there are only two such factories, and only about 10 or 12 in the entire country. The fishing and fish-canning industries recognize that an increased development of such processing would be valuable for utilizing low-quality or spoiled fish, temporary surpluses, and waste from canning factories; and progress is being made in this direction.

It should be noted that the fish rejected for consumption purposes but not processed for fish meal are not entirely wasted. They are usually bought by farmers in the neighborhood of fishing centers and used for fertilizer directly.

Foreign Trade

The exports and imports of fish and fish products in 1949 are shown in Tables 13 and 14.

TABLE NO. 13 - EXPORTS OF FISH IN 1948 AND 1949 (IN METRIC QUINTALS)

ITEM & COUNTRY OF DESTINATION	YEAR 1948	1ST QTR. 1949	2ND QTR. 1949	3RD QTR. 1949	4TH QTR. 1949	YEAR 1949 ^{1/}
<u>WATER FISH, FRESH, TOTAL</u>	776	1,137	1,153	202	1,338	3,830
ENGLAND	120	600	432	0	213	1,245
ITALY	431	438	298	64	605	1,405
SWITZERLAND	180	95	153	23	90	361
OTHERS	45	4	270	115	430	819
<u>SEA FISH, FRESH, TOTAL</u>	2,531	1,093	6,506	3,412	14,192	25,203
ENGLAND	117	0	1,527	886	144	2,557
GERMANY	31	0	0	0	8,620	8,620
ITALY	1,644	361	4,574	2,092	4,809	11,836
BELGIUM	1	521	0	67	10	598
OTHERS	738	211	405	367	609	1,592
<u>DRIED, SALTED, SMOKED, TOTAL</u>	25,427	13,757	13,447	15,359	36,937	79,500
ITALY	432	2,194	1,567	1,769	11,116	16,646
ALGERIA, MOROCCO & TUNISIA	4,519	3,631	2,505	2,009	10,877	19,022
MARTINIQUE, GUADALOUPE	8,787	5,278	5,334	5,806	9,501	25,919
REUNION	6,552	1,691	1,983	4,764	3,445	11,883
OTHERS	5,137	963	2,058	1,011	1,998	6,030
<u>LOBSTERS AND OTHER</u>						
<u>CRUSTACEANS, TOTAL</u>	111	28	46	42	18	134
SWITZERLAND	73	24	20	11	15	70
BELGIUM	17	2	26	21	2	51
OTHERS	21	2	0	10	1	13
<u>OYSTERS, TOTAL</u>	9,851	4,115	6,132	3,789	3,647	17,683
ENGLAND	3,579	44	2,469	3,237	29	5,779
BELGIUM	276	257	0	129	139	525
SWITZERLAND	859	117	3	0	105	225
NETHERLANDS	767	0	2,593	0	0	2,593
ALGERIA, MOROCCO & TUNISIA	4,064	3,567	769	355	2,881	7,572
OTHERS	306	130	298	68	493	989

^{1/} PRELIMINARY DATA.

SOURCE: DIRECTION OF CUSTOMS, MINISTRY OF FINANCE.

TABLE No. 13 - EXPORTS OF FISH IN 1948 AND 1949 (IN METRIC QUINTALS) - CONTINUED*

ITEM & COUNTRY OF DESTINATION	YEAR 1948	1ST QTR. 1949	2ND QTR. 1949	3RD QTR. 1949	4TH QTR. 1949	YEAR 1949 ^{1/}
<u>MUSSELS AND OTHER MOLLUSCS, TOTAL</u>	9,660	4,913	3,258	2,022	3,136	13,329
ITALY	4,039	3,367	1,995	136	161	5,659
ALGERIA, MOROCCO AND TUNISIA	5,501	1,518	1,250	1,885	2,968	7,621
OTHERS	120	28	13	1	7	49
<u>CANNED FISH:</u>						
<u>SALMONIDAE, TOTAL</u>	136	30	11	7	723	771
GUADALOUPE	0	22	0	0	6	28
FRENCH WEST AFRICA & ALGERIA	81	0	10	0	655	665
OTHERS	55	8	1	7	62	78
<u>SARDINES, TOTAL</u>	8,576	2,132	1,768	904	1,388	6,192
ENGLAND	16	0	232	41	2	275
NETHERLANDS	248	83	119	2	158	362
SWEDEN	1,684	261	69	208	121	659
BELGIUM	484	229	72	18	159	478
UNITED STATES	864	235	55	0	118	408
FRENCH WEST AFRICA, EQUATORIAL AFRICA AND ALGERIA	1,672	283	196	56	231	766
FRENCH INDO-CHINA	164	98	223	378	50	749
MARTINIQUE	28	99	38	0	0	137
OTHERS	3,416	844	764	201	549	2,358
<u>OTHER PREPARED FISH, TOTAL</u>	17,473	5,351	4,850	2,174	6,829	19,204
GERMANY	14	159	0	0	0	159
ITALY	3,833	293	172	88	0	553
SWITZERLAND	5,097	1,027	924	301	1,956	4,208
FRENCH WEST AFRICA AND EQUATORIAL AFRICA	2,620	1,783	1,123	695	1,164	4,765
ALGERIA	764	1,104	620	710	2,517	4,951
FRENCH INDO-CHINA	779	365	957	227	397	1,946
OTHERS	4,366	620	1,054	153	795	2,622
<u>CRUSTACEANS (PREPARED), TOTAL</u>	772	273	285	166	460	1,184
BENELUX	38	9	19	14	25	67
UNITED STATES	0	10	10	8	31	59
VENEZUELA	15	3	18	26	75	122
ALGERIA AND FRENCH WEST AFRICA AND EQUATORIAL AFRICA	226	123	88	55	73	339
FRENCH INDO-CHINA	310	89	131	26	175	421
OTHERS	183	39	19	37	81	176

^{1/} PRELIMINARY DATA.

SOURCE: DIRECTION OF CUSTOMS, MINISTRY OF FINANCE.

TABLE No. 14 - IMPORTS OF FISH IN 1948 AND 1949 (IN METRIC QUINTALS)

ITEM AND COUNTRY OF ORIGIN	YEAR 1948	1ST QTR. 1949	2ND QTR. 1949	3RD QTR. 1949	4TH QTR. 1949	YEAR 1949 ^{1/}
<u>WATER FISH, FRESH, TOTAL</u>	4,009	489	140	744	1,813	3,186
SWEDEN	0	8	0	68	142	218
DENMARK	235	0	50	252	362	664
NETHERLANDS	3,439	481	71	375	1,297	2,224
OTHERS	335	0	19	49	12	80
<u>SEA FISH, FRESH, TOTAL</u>	167,436	14,973	33,687	4,724	26,441	79,825
<u>BARS, TURBOTS, SOLES, TOTAL</u>	290	45	659	414	3,262	4,380
DENMARK	0	0	0	0	223	223
NETHERLANDS	134	45	655	294	1,534	2,528
NORWAY	0	0	0	0	0	0
BENELUX	156	0	0	120	1,470	1,590
ALGERIA AND MOROCCO	0	0	0	0	25	25
OTHERS	0	0	4	0	10	14
<u>OTHER FRESH SEA-FISH AND</u>						
<u>FILLETS, TOTAL</u>	167,146	14,928	33,028	4,310	23,179	75,445
DENMARK	52,218	81	0	437	6,065	6,583
ENGLAND	1,587	395	429	0	2,153	2,977
ICELAND	21,891	1,550	2,437	7	1,886	5,880
NORWAY	38,978	9,788	22,818	2,222	5,778	40,606
NETHERLANDS	13,717	2,602	3,269	689	2,808	9,368
BENELUX	15,269	0	0	0	0	0
SWEDEN	2,109	0	2,151	0	0	2,151
ALGERIA AND MOROCCO	9,874	512	1,720	789	3,003	6,024
OTHERS	11,503	0	204	166	1,486	1,856
<u>SEA-FISH, SALTED, DRIED, SMOKED</u>						
<u>HERRINGS, TOTAL</u>	47,627	19,400	24,519	1,694	8,991	54,604
ENGLAND	5,400	0	0	0	0	0
ICELAND	0	95	0	0	0	95
DENMARK	18,001	0	0	0	0	0
NORWAY	13,781	13,433	3,428	0	591	17,452
NETHERLANDS	8,399	5,872	21,078	1,694	8,400	37,044
OTHERS	2,046	0	13	0	0	13
<u>COD, HADDOCK, STOCKFISH, TOTAL</u>	58,659	3,889	3,300	12,263	11,597	31,049
NORWAY	72	4	0	0	400	404
NETHERLANDS	1,322	0	0	0	0	0
ALGERIA	24,659	3,261	3,038	10,638	6,105	23,042
MOROCCO	30,732	601	156	1,336	4,823	6,916
ST-PIERRE & MIQUELON	504	13	85	168	218	484
OTHERS	1,370	10	21	121	51	203
<u>SHRIMP, LOBSTERS AND OTHER</u>						
<u>CRUSTACEANS, TOTAL</u>	3,681	133	1,608	1,600	4,295	7,636
ITALY	24	0	0	122	78	200
NORWAY	0	0	0	74	276	350
NETHERLANDS	3,047	2	1,106	543	3,113	4,764
ALGERIA, MOROCCO & TUNISIA	521	101	459	723	499	1,782
OTHERS	89	30	43	138	329	540
<u>MUSSELS AND OTHER MOLLUSCS, TOTAL</u>	220,356	72,402	30,881	12,304	164,995	280,582
DENMARK	20,524	25,759	0	0	41,061	66,820
NETHERLANDS	197,390	46,630	30,540	12,303	123,644	213,117
BENELUX	2,427	0	338	0	290	628
OTHERS	15	13	3	1	0	17

^{1/} PRELIMINARY DATA.

SOURCE: DIRECTION OF CUSTOMS, MINISTRY OF FINANCE.

TABLE No. 14 - IMPORTS OF FISH IN 1948 AND 1949 (IN METRIC QUINTALS) - CONTINUED

ITEM AND COUNTRY OF ORIGIN	YEAR 1948	1ST QTR. 1949	2ND QTR. 1949	3RD QTR. 1949	4TH QTR. 1949	YEAR 1949 ^{1/}
CANNED FISH:						
<u>SALMONIDAE, TOTAL</u>	291	8	24	4	6	42
SWEDEN	0	0	0	0	3	3
SWITZERLAND	13	0	7	0	0	7
UNITED STATES	174	1	15	4	3	23
CANADA	100	0	0	0	0	0
ALGERIA AND MOROCCO	1	7	2	0	0	9
OTHERS	3	0	0	0	0	0
<u>SARDINES, TOTAL</u>	208,263	46,868	70,607	102,742	77,764	297,981
PORTUGAL	35	39	1,207	13,792	2,566	17,604
FRENCH WEST AFRICA	3,678	171	190	47	24	432
ALGERIA	24,331	4,474	6,433	12,170	9,441	32,518
MOROCCO	174,922	38,518	61,060	69,769	63,262	232,609
TUNISIA	5,233	3,658	1,705	6,958	2,440	14,761
OTHERS	64	8	12	6	31	57
<u>OTHER PREPARED FISH, TOTAL</u>	45,399	4,496	9,145	18,224	11,893	43,758
DENMARK	2	0	233	0	20	253
SPAIN	0	0	2,001	135	0	2,136
NORWAY	784	293	557	49	19	918
FRENCH WEST AFRICA	16,109	465	489	571	205	1,730
ALGERIA, MOROCCO & TUNISIA	26,687	3,201	5,569	17,079	11,457	37,306
OTHERS	1,817	537	296	390	192	1,415
<u>CRUSTACEANS AND MOLLUSCS, TOTAL</u>	1,274	15	196	270	131	612
FRENCH WEST AFRICA	926	0	10	0	14	24
ENGLAND	264	0	0	0	0	0
ALGERIA, MOROCCO & TUNISIA	76	11	184	270	100	565
OTHERS	8	4	2	0	17	23

^{1/} PRELIMINARY DATA.

SOURCE: DIRECTION OF CUSTOMS, MINISTRY OF FINANCE

Technical Advances

The only notable technical advance recently made in the fishing industry, other than factors referred to in preceding sections of this report, is the introduction of the use of the live-bait method for fishing tunny. While its spread is encouraged by the Scientific and Technical Office for Maritime Fishing, progress made so far is not great since fishermen are slow to give up their traditional methods.